IN THE CLAIMS

What is claimed is:

1. A system, comprising:

a receive subsystem that includes

a receive first-in-first-out buffer (FIFO) having a plurality of entries, each receive FIFO entry storing voice packet data and corresponding control data for the voice packet data, the control data indicating packet layer information corresponding to the voice packet data; and

a receive queue having a plurality of queue entries, each queue entry storing queue information for each packet stored in the receive FIFO, the queue information including a packet standard value that indicates when the packet corresponding to the entry passes predetermined header processing filters.

2. The system of claim 1, wherein:

the control data indicates voice data packet corresponding to a layer 3 packet header and a layer 4 packet header.

3. The system of claim 1, wherein:

the control data indicates starting portions of packet, middle portions of the packet, and ending portions of the packet.

4. The system of claim 1, wherein:

the packet standard value indicates that a packet layer 3 field matches at least one predetermined layer 3 address.

5. The system of claim 1, wherein:

the packet standard value indicates that a packet layer 4 field matches at least one predetermined value layer 4 address.

6. The system of claim 1, further including:

a receive pipeline that forwards voice packet data of an entry from the receive FIFO according to the control data for the entry.

7. The system of claim 6, wherein:

the receive pipeline includes

an input coupled to the receive FIFO,

a layer 2 processor that selectively removes layer 2 information from voice packet data, and

a layer 3 processor that selectively removes layer 3 information from voice packet data.

8. The system of claim 7, wherein:

the layer 3 processor stores selected layer 3 information.

9. The system of claim 7, further including:

a layer 4 processor that selectively removes layer 4 information from voice packet data.

10. The system of claim 9, wherein:

the layer 4 processor stores selected layer 4 information.

11. The system of claim 1, further including:

a direct memory access controller that transfers voice packet data of an entry from the receive FIFO according to the control data for the entry.

12. The system of claim 11, further including:

a receive arbitrator coupled to the receive queue that controls the transfer of voice packet data from the receive FIFO the receive pipeline and direct memory access controller according to the queue information of the receive queue.

13. A system for distinguishing between types of voice packets, comprising:

a voice packet memory having a plurality of storage locations for storing voice packet data;

a pre-processing path coupled to the voice packet memory that includes a plurality of layer processors that remove header information from voice packet data; and

a direct memory access path coupled to the voice packet memory that transfers voice packet data to the voice packet memory.

14. The system of claim 13, wherein:

the pre-processing path includes a layer register that stores selected header field data from the voice packet data.

15. The system of claim 14, wherein:

the header field data includes an Internet protocol source address..

16. The system of claim 14, wherein:

the header field data includes a User Datagram Protocol (UDP) destination port value.

17. The system of claim 14, further including:

a receive process subsystem that receives header field data from the layer register and voice packet data from the pre-processing path and generates voice packet memory address locations for the voice packet data.

18. A system for processing voice-over-network data packets, comprising:

a voice packet memory having a plurality of storage locations;

a receive subsystem that includes

a first data path for transferring voice data packets to the voice memory, and

a second data path for removing and storing header information of a voice data packet and outputting voice data; and

a receive processor subsystem that receives stored header information from the second path and generates voice packet memory address locations for voice data output from the second data path.

19. The system of claim 18, wherein:

the receive subsystem further includes a receive first-in-first-out buffer (FIFO) having a receive FIFO input that receives voice data packets and a receive FIFO output coupled to the first data path and second data path.

20. The system of claim 18, further including:

a network interface coupled to the receive subsystem that includes

a media access control core coupled to a media interface for decoding voice data packets transmitted on a transmission media; and

a transaction layer first-in-first-out buffer (FIFO) that stores portions of voice data packets decoded by the media access control core.